The Application of Virtual Simulations using Second Life in a Foreign Language Classroom

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Abstract

The purpose of this paper is to investigate the effects of virtual simulation-based language learning in a foreign language class in Korea. Total 35 1st-year university students in Korea participated in this research to figure out the effect of simulations. A virtual English learning community, 'Cypris Chat' in Second Life was selected as a learning tool. For the data collection, a survey questionnaire was distributed and analysed quantitatively. The result shows that the majority of the students had a positive attitude toward using a virtual simulation in English learning and had better understanding in learning English by experiencing an authentic practice. The first section of this paper provides a general overview of simulations in educational settings through an insightful literature review of the current research in the area. The review includes a comprehensive outlook on simulations, an example of successful classroom integration and some of the considerations researchers have found for their implementation. The latter section addresses the research method, results and conclusions.

Keywords: *Simulation; Simulation-based teaching; Simulation for Language Classroom; Language Learning & Teaching*

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Introduction

Under the flag of the globalization in the 21st century, hundreds and thousands of students of all ages in the world are learning a second, third or foreign language. In particular, the language of English is now even called, 'Globish'(global+English), or 'Worldlish'(world+English), since it has become an international language with global significance. Depending on each individual's need and objective, although there may exist a variety of reasons to learn English, one of the main obejctives to learn English is because of its significance as an international standard for the language. For a long time, language has been considered as the vehicle of communication by which human beings live, share, and build ideas and understandings of the present, reflect on the past, and imagine the future. (MDE, 1996). More recently, as the ICT (information and communication technology) skills are rapidly developed, the use of English has became much widely spreaded. Surpringly, the advent of the Internet, and social network media such as 'Facebook' or 'Twitter' made this phenamenon contributed English to become a dominant language in the world. In other words, English becomes a language to learn to live in a global era. Although educators in Korea put an emphasis on the importance of learning English, the way teaching and learning English today does not differ from 1980s or 1990s. English is still taught focused on the grammatical rules, syntactic structures, and rote memorization of vocabulary.

The main purpose of this paper is therefore, to explore how EFL college students in Korea consider virtual simulations using Second life as a learning tool in English class, and how they perceive such simulations can practically help them to engage in English learning, and to promote motivation. So, this paper will provide a general overview of simulations in educational settings through an insightful literature review of the current research in the area. The review includes a comprehensive outlook on simulations, an example of successful classroom integration, and some of the considerations researchers have found for their implementation. It also contains a revision of online simulations and gaming in educational settings as people in general are spending an increasing amount of time engaging in these types of activities. The final section views the results of survey questionnaires and students' feedback on the use of simluations in English class.

What is Simulation?

Terminology in general, in the area of education can be somewhat of a slippery slope as the same word can be defined by different authors in many diverse ways. The following section aims to clear some of the most important terms related to simulations. Generally speaking, a simulation can be defined as an operating model or representation of a real-world system that may or may not take on certain aspects of reality for participants; they contain rules that allow users to make the simulation activity flexible and variable and most importantly, the cost of errors for those involved is always low, 'protecting' them from harsh consequences of mistakes (Garris, et al, 2002). Jones (1995) furthers this definition by adding that "the participants have (functional) roles, duties and sufficient key information about the problem, to carry out these duties without play acting or inventing key facts" (p. 18).

Simulations have been used in language classes for decades and differ from role-plays in that in role-plays the participant acts a part with minimum background information, while inventing a great deal of the scenario and without an explicit reference system (García-Carbonell, et al, 2001; Naidu & Linser, 2000). Peregoy & Boyle (2009) give an example of a simulation in a classroom where students are playing the role of senators and Congress men and women. The task is to recreate the bill passing process by writing a bill from the ground up, taking it through the various committees and finally, voting on it. This is a clear representation of the difference between a role play and a simulation in the sense that the former would not follow such a structured format and students would not be taking part in the actual "reality" of Congress. This simulation results not only in the practice of target language, but it provides learners with background knowledge in how bills are passed for further classroom activities, especially if they will be reading abstract or complicated texts (Davis, 1996; Peregoy & Boyle, 2009).

Simulations in Education

Peregoy & Boyle (2009) mention that simulations are particularly useful for language learners because "they provide direct experience for learning"; this is due to the fact that they are considering and taking into account different channels of information, including the nonverbal one (p. 334). The authors further say that this activity allows students to develop vocabulary as it is presented in context through the background information they are receiving, making these new words meaningful.

Additionally to the benefits proposed by Peregoy & Boyle (2009), Ranalli (2008) presents a more comprehensive list that researchers and teachers have found for the use of simulations in language learning. Simulations are said to encourage language use in specific contexts, such as is promoted in situated cognition; they foster metacognition and strategy use as they help students think of the

language they need for the situation, set attainable communicative goals and the evaluation of the action plan. Simulations also stimulate cross cultural communication and aid the reduction of fear of making mistakes by lowering affective filters to facilitate language acquisition (Krashen, 1987). Ranalli (2008) adds that simulations are learner centered and give students the chance to solve problems with minimal teacher intervention. He closes by mentioning that coursework is made much more appealing as instrumental motivation arises by "the function, the duties, the responsibilities and circumstances in which the participants find themselves" (Jones, 1982, p. 10 as cited in Ranalli, 2008).

Computer-Based Simulations and Gaming

Aldrich (2004) defines computer based simulations or online simulations as computer-generated versions of real-world objects, processes or situations/contexts. These simulations can take many formats such as two dimensional, text-driven, or three dimensional. Online simulations contrast to games in that the latter tend to follow rules that differ from real life and have a competitive component that allows the player to attain a challenging goal. Caillois (1961 as cited in Garris, et al, 2002) adds that a characteristic of a game is that it is done voluntarily and is enjoyable. He supplements this information by mentioning that games are completely separated from the real world, that is to say they do not aim to represent any real life system and that although the costs of mistakes can have consequences, they can be contained in the gaming arena. Garris, et al. (2002) add that it is not incorrect to consider simulations and games similar in some respects, but that the key difference is that the former represents reality and the later does not.

In addition to the benefits of simulations, adding the technological component brings additional advantages. A characteristic that both gaming and simulations share is that they provide meaningful and realistic contexts that allow language learners to make rich associations (Puroshtoma, 2005). These simulations and games can even be considered as bridges between the students and the target-language culture through accurate socio-cultural contexts and as the "voice" of students who are regularly shy through synchronous chats (Brooks, 2007; Schwienhorst, 2002). Tsai, et al (2012) complement this by mentioning that in general, educational games and simulations enhance leaning motivation and social interaction.

When it comes to actually incorporating computer based simulations and games into the curriculum, many authors suggest that briefing sessions (e.g. planning, linguistic preparation, role and task familiarization) should take place before the simulations and debriefing afterwards (e.g. consolidate student learning though the discussion of their experience) (Bambrough, 1994; Gaudart, 1999; Waniganayake, et al, 2006). In fact, Garris, et al. (2005) mention that debriefing should be considered as the most critical part of utilizing a game or a simulation in a language classroom. They state that is the actual moment when students can review and analyze what happened or did not happen, if there were difficulties and how they resolved them, and how this all connects to their own context and learning process. They add that through debriefing, students can "draw parallels" between the game or simulation, the learning experience and their lives (p. 455).

Research Methods

Simulations at Second Life

Second Life is the name of the virtual world in which online users can do about anything that they can imagine, that is, a world without physical boundaries. The most common activities in Second Life are talking, sharing, exploring, studying, playing, singing, dancing, building or more. In 2007, Second Life launched a service used for a foreign language teaching and learning. Both Second Life and real life language educators have started to utilize this virtual world for language teaching. As a result of that, English as a foreign language has gotten a presence through several educational institutions, such as the British Council. Through joining of British Council's the Second Life virtual environment (http://learnenglish.britishcouncil.org/en/second-life), learners from all over can experience interactive English activities and quests. In this research, the Cypris Chat Group (http://www.cyprischat.org) was selected, which was a virtual English language learning community located in Second Life, because it is one of the most popular islands in terms of language teaching and learning.

School

With a 40-year history, it is a Private University with 11,150 enrolled students in which is located in the suburban area of Seoul, Korea. The school offers 39 study areas, and fresh students of each department should take basic, intermediate and advanced English courses in the first year. There is a 6:1 student-faculty ratio with around 200 faculty members.

Class

It was an intermediate English class that met twice a week for 50 minutes. There was homework to be turned in every class; it mainly comprised of reading assigned pages on the textbook and answering exercises based on the grammatical points covered or watching videos. A typical lecture began right on time with the teacher presenting the daily program and immediately beginning the lesson. The teacher used a Power Point presentation in every single class. The presentations had lots of images and very few words.

Participants

The class was comprised of 35 EFL students. Their average age was 20 years old at the time of 2011, and they all were enrolled in different academic programs. Based on the university curriculum, students were required to take English courses, regardless of their majors or minors. In this class, there were diverse students from different department of economics, education, music, chemistry, history, communication and more. Before the first class started, they were asked whether they had any previous experience to simulations, and the result was none of them had participated in any virtual simulation based lecture before.

Classroom setting

The class was held in a computer-equipped classroom. There was a large whiteboard and a screen in front, connected to the lecturers' computer. The room was equipped with a surround sound system, a state of the art computer station and a projector. For the class, first, students were required to register on Second Life, and then to download and install it on each computer. After setting up Second Life, all the students joined the Cypris Chat (http://maps.secondlife.com/secondlife/Wellston/166/87/23).

Figure 1. A Screenshot of the Cypris Chat in Second Life

Procedures

In each class, 35 participants followed the learning steps within the given timeframe, advised by Merryman (2012). First 10 minutes were assigned for warm-up when students had a little time getting to know each other that is even from outside the class, and to navigate the learning content. For the rest of the class, students were presented the topic, new vocabulary, expressions, or related material to be learned. After that, they were encouraged to perform what they have learned. At the end of the session, wrap-up with a little feedback to the group and questions were provided.

Figure 2. A Screenshot of Participating a Conversation in the Cypris Chat

Data Collection and Analysis

A survey questionnaire was administered to participants who enrolled in the intermediate English class. All of them in this research spent 10 hours using the Cypris Chat in Second Life. As shown in Table 1 below, a total number of 12 survey questionnaires for these participants were distributed after the all class sessions were over, and the survey consisted of 1-5 likert scale (strongly disagree – strongly agree). The gathered data were analysed using SPSS 10.

Table 1. A Survey Questionnaire on a Simulation using the Cypris Chat

Questionnaire	1	2	3	4	5
1. Simulations (Cypris Chat) provided me with an opportunity to enjoy learning.					
2. Simulations (Cypris Chat) made me a learning activity more interesting.					
3. Simulations (Cypris Chat) made my interest for English learning deepened.					
4. Simulations (Cypris Chat) helped me to have an authentic learning experience.					
5. Simulations (Cypris Chat) were helpful to me in learning English.					
6. Simulations (Cypris Chat) made me have a cooperative learning by interacting with classmates.					
7. Simulations (Cypris Chat) made English learning fun and pleasant.					
8. Simulations (Cypris Chat) made me more engaged in the lesson.					
9. Simulations (Cypris Chat) boosted me to study English more.					
10. Simulations (Cypris Chat) made the class atmosphere more enjoyable.					
11. Simulations (Cypris Chat) helped me like English study more.					
12. Simulations (Cypris Chat) offered me an authentic opportunity to practice L2.					

* Note: 5-point likert scale (strongly disagree=1, disagree=2, neutral=3, agree=4, strongly agree=5)

Findings
Students' Response on English Learning using the Cypris Chat

In order to figure out students' response on general English learning, 12-item questionnaire was administered, and as shown below in Table 2, overall results (item #1, #2, #5, #10) show a pretty high mean ranging from 3.689 to 3.844. Based on the given results, it can be interpreted that the Cypris Chat simulation offered the meaningfully effective learning experience to students, and made student engaged in further learning. In other words, by having a meaningful learning experience, students were able to gain more interest and zeal for English learning which was considered difficult and stressful to study.

Table 2. Descriptive Statistics on Students' Response on English Learning

Item #	No.	M	SD	t
1. It provided an opportunity to enjoy learning.	35	3.832	.581	-.125
2. It made a learning activity more interesting.	35	3.844	.572	2.56
5. It was helpful in learning English.	35	3.689	.651	-.132
10. It made the class atmosphere more enjoyable.	35	3.806	.614	.301

Students' Response on Understanding the Learning Content

Next Table 3 shows students' response on the degree of understanding the learning content which they learned. The results represent how the Cypris Chat helped them to have better understand for real-world English communication. Items (#4, #6, #8, #12) also show a very high mean ranging from 3.756 to 3.882. Most of the students strongly agreed that they were able to have an authentic learning experience by using the Cypris Chat on Second Life.

Table 3. Descriptive Statistics on Students' Response on Understanding the Learning Content

Item #	No.	M	SD	*t*
4. It helped to have an authentic learning experience.	35	3.786	.508	.366
6. It made me have a cooperative learning by interacting with classmates.	35	3.872	.597	-.474
8. It made me more engaged in the lesson.	35	3.756	.470	-.128
12. It offered an authentic opportunity to practice L2.	35	3.882	.850	1.53

Students' Response on Motivation

Below Table 4 shows students' response on the change of motivation towards simulations. As addressed previously in Table 2 & 3, the result of descriptive statistics (item #3, #7, #9, #11) here also shows a high mean score from 3.872 to 4.000. Generally speaking, it is not always fun and easy to learn English, but students expressed their strong willingness and interest towards learning English through this research using simulations. In terms of the change of the affective filters, it is clear that simulations using the Cypris Chat boosted students' learning experience, and made their motivation level changed into an enjoyable stage.

Table 4. Descriptive Statistics on Students' Response on Motivation

Item #	No.	M	SD	*t*
3. It made my interest for English learning deepened.	35	4.000	1.02	.386
7. It made English learning fun and pleasant.	35	3.921	.655	.366
9. It boosted me to study English more.	35	3.872	.592	-.128
11. It helped me like English study more.	35	3.925	.721	.954

Conclusions

This paper addresses an overview of what a simulation is, how it has been used in language classroom. As the research findings show above, the simulations using Second Life provided an educational and interesting atmosphere for English learning. Besides, simulations provided learners with a strong sense of motivation for general English learning. To sum up, one of the greatest advantages to be gained from the use of simulations in English class is that students have more interest and motivation in their study of English by experiencing the language in an authentic environment. Therefore, it is concluded that the use of simulations in the English language classroom is promising because it offers learners an opportunity to practice the target language practically. It is also expected that students can enhance their communicative competence through activities using simulations.

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